

WHAT IS CLAIMED IS:

1 1. A method for processing predicates in an iterator function, comprising:
2 when an iterator function included in a statement is invoked,
3 obtaining one or more predicates included in the statement;
4 applying the one or more predicates to a row of data;
5 if applying the one or more predicates results in a match, returning the row
6 of data; and
7 if applying the one or more predicates does not result in a match,
8 searching for another row of data for which application of the one or more predicates
9 results in a match.

1 2. The method of claim 1, wherein obtaining the one or more predicates
2 comprises:
3 obtaining a qualification descriptor that describes the one or more predicates and
4 one or more functions.

1 3. The method of claim 2, wherein each function is used to process one of
2 the predicates.

1 4. The method of claim 1, wherein each of the one or more predicates
2 comprises a simple predicate.

1 5. The method of claim 1, wherein the iterator function is invoked by a data
2 store engine and further comprising:
3 returning the row of data to the data store engine.

1 6. A method for processing predicates, comprising:
2 receiving a statement including an iterator function and one or more predicates;
3 creating a qualification descriptor that describes the one or more predicates and
4 one or more functions that are to be used to evaluate the one or more predicates; and
5 invoking the iterator function one or more times, until receiving a done indicator
6 from the iterator function.

1 7. The method of claim 6, wherein the qualification descriptor provides a
2 handle to each of the one or more functions.

1 8. The method of claim 6, further comprising:
2 when the iterator function is invoked, receiving an indication from the iterator
3 function indicating whether the one or more predicates were applied by the iterator
4 function.

1 9. The method of claim 6, further comprising:
2 when the iterator function is invoked, receiving a row of data from the iterator
3 function that matches the qualification of the one or more predicates.

1 10. The method of claim 9, further comprising:
2 applying one or more additional predicates to the received row of data, wherein
3 the one or more additional predicates refer to a column of data that is not in a result set
4 generated by the iterator function.

1 11. The method of claim 9, further comprising:
2 applying one or more additional predicates to the received row of data, wherein
3 the one or more additional predicates performs a join between two tables.

1 12. A method for processing predicates, comprising:
2 under control of a data store engine,
3 receiving a statement including an iterator function and one or more
4 predicates;
5 creating a qualification descriptor that describes the one or more
6 predicates and one or more functions that are to be used to evaluate the one or more
7 predicates; and
8 invoking the iterator function; and
9 under control of an iterator function processor,
10 retrieving the qualification descriptor;
11 obtaining a row of data that matches the qualification in the qualification
12 descriptor; and
13 returning the row of data to the data store engine.

1 13. The method of claim 12, wherein the qualification descriptor describes
2 one or more simple predicates to be applied by the iterator function processor.

1 14. An article of manufacture including a program for processing predicates
2 in an iterator function, wherein the program causes operations to be performed, the
3 operations comprising:
4 when an iterator function included in a statement is invoked,
5 obtaining one or more predicates included in the statement;
6 applying the one or more predicates to a row of data;
7 if applying the one or more predicates results in a match, returning the row
8 of data; and
9 if applying the one or more predicates does not result in a match,
10 searching for another row of data for which application of the one or more predicates
11 results in a match.

1 15. The article of manufacture of claim 14, wherein operations for obtaining
2 the one or more predicates further comprise:
3 obtaining a qualification descriptor that describes the one or more predicates and
4 one or more functions.

1 16. The article of manufacture of claim 15, wherein each function is used to
2 process one of the predicates.

1 17. The article of manufacture of claim 14, wherein each of the one or more
2 predicates comprises a simple predicate.

1 18. The article of manufacture of claim 14, wherein the iterator function is
2 invoked by a data store engine and wherein the operations further comprise:
3 returning the row of data to the data store engine.

1 19. An article of manufacture including a program for processing predicates,
2 wherein the program causes operations to be performed, the operations comprising:
3 receiving a statement including an iterator function and one or more predicates;
4 creating a qualification descriptor that describes the one or more predicates and
5 one or more functions that are to be used to evaluate the one or more predicates; and
6 invoking the iterator function one or more times, until receiving a done indicator
7 from the iterator function.

1 20. The article of manufacture of claim 19, wherein the qualification
2 descriptor provides a handle to each of the one or more functions.

1 21. The article of manufacture of claim 19, wherein the operations further
2 comprise:
3 when the iterator function is invoked, receiving an indication from the iterator
4 function indicating whether the one or more predicates were applied by the iterator
5 function.

1 22. The article of manufacture of claim 19, wherein the operations further
2 comprise:
3 when the iterator function is invoked, receiving a row of data from the iterator
4 function that matches the qualification of the one or more predicates.

1 23. The article of manufacture of claim 22, wherein the operations further
2 comprise:
3 applying one or more additional predicates to the received row of data, wherein
4 the one or more additional predicates refer to a column of data that is not in a result set
5 generated by the iterator function.

1 24. The article of manufacture of claim 22, wherein the operations further
2 comprise:
3 applying one or more additional predicates to the received row of data, wherein
4 the one or more additional predicates performs a join between two tables.

1 25. An article of manufacture including a program for processing predicates,
2 wherein the program causes operations to be performed, the operations comprising:
3 under control of a data store engine,
4 receiving a statement including an iterator function and one or more
5 predicates;

6 creating a qualification descriptor that describes the one or more
7 predicates and one or more functions that are to be used to evaluate the one or more
8 predicates; and
9 invoking the iterator function; and
10 under control of an iterator function processor,
11 retrieving the qualification descriptor;
12 obtaining a row of data that matches the qualification in the qualification
13 descriptor; and
14 returning the row of data to the data store engine.

1 26. The article of manufacture of claim 25, wherein the qualification
2 descriptor describes one or more simple predicates to be applied by the iterator function
3 processor.

1 27. A computer system having at least one program for processing predicates
2 in an iterator function, comprising:
3 when an iterator function included in a statement is invoked,
4 obtaining one or more predicates included in the statement;
5 applying the one or more predicates to a row of data;
6 if applying the one or more predicates results in a match, returning the row
7 of data; and
8 if applying the one or more predicates does not result in a match,
9 searching for another row of data for which application of the one or more predicates
10 results in a match.

1 28. The computer system of claim 27, wherein obtaining the one or more
2 predicates comprises:
3 obtaining a qualification descriptor that describes the one or more predicates and
4 one or more functions.

1 29. The computer system of claim 28, wherein each function is used to
2 process one of the predicates.

1 30. The computer system of claim 27, wherein each of the one or more
2 predicates comprises a simple predicate.

1 31. The computer system of claim 27, wherein the iterator function is invoked
2 by a data store engine and further comprising:
3 returning the row of data to the data store engine.

1 32. A computer system having at least one program for processing predicates,
2 comprising:
3 receiving a statement including an iterator function and one or more predicates;
4 creating a qualification descriptor that describes the one or more predicates and
5 one or more functions that are to be used to evaluate the one or more predicates; and
6 invoking the iterator function one or more times, until receiving a done indicator
7 from the iterator function.

1 33. The computer system of claim 32, wherein the qualification descriptor
2 provides a handle to each of the one or more functions.

1 34. The computer system of claim 32, further comprising:
2 when the iterator function is invoked, receiving an indication from the iterator
3 function indicating whether the one or more predicates were applied by the iterator
4 function.

1 35. The computer system of claim 32, further comprising:
2 when the iterator function is invoked, receiving a row of data from the iterator
3 function that matches the qualification of the one or more predicates.

1 36. The computer system of claim 35, further comprising:
2 applying one or more additional predicates to the received row of data, wherein
3 the one or more additional predicates refer to a column of data that is not in a result set
4 generated by the iterator function.

1 37. The computer system of claim 35, further comprising:
2 applying one or more additional predicates to the received row of data, wherein
3 the one or more additional predicates performs a join between two tables.

1 38. A computer system for processing predicates, comprising:
2 under control of a data store engine,
3 means for receiving a statement including an iterator function and one or
4 more predicates;
5 means for creating a qualification descriptor that describes the one or
6 more predicates and one or more functions that are to be used to evaluate the one or more
7 predicates; and
8 means for invoking the iterator function; and
9 under control of an iterator function processor,
10 means for retrieving the qualification descriptor;

11 means for obtaining a row of data that matches the qualification in the
12 qualification descriptor; and
13 means for returning the row of data to the data store engine.

1 39. The computer system of claim 38, wherein the qualification descriptor
2 describes one or more simple predicates to be applied by the iterator function processor.